

IN THE CLAIMS:

Please amend the claims such that the pending claims read in accordance with the following listing of claims:

36. (Currently Amended) A communications system comprising: a hierachical mesh network comprising at least a first mesh network tier and a second mesh network tier:

a the first mesh network tier comprising a plurality of first network subscriber units and a first network sink node unit configured to wirelessly communicate with the first network subscriber units; and

a the second mesh network tier geographically at least partly overlapping the first network and comprising a plurality of second mesh network tier subscriber units and a second mesh network tier sink node unit configured to wirelessly communicate with the second mesh network tier subscriber units; and

a connection between the first mesh network tier sink node unit and a second mesh network tier unit configured to communicate in the second network, whereby one of the a-first network subscriber units is configured to be provided with a communication path via the first mesh network tier sink node unit to said second mesh network tier unit.

37. (Currently Amended) A communications system as claimed in claim 36, wherein wireless communication in the first mesh network tier is independent of wireless communication in the second mesh network tier.

38. (Currently Amended) A communications system as claimed in claim 37, wherein wireless communication in the first mesh network tier is in a different frequency band from wireless communication in the second mesh network tier.

39. (Currently Amended) A communications system as claimed in claim 38, wherein the first mesh network tier comprises a plurality of first network sink node units with which the first mesh network tier subscriber units are configured to wirelessly communicate.

40. (Currently Amended) A communications system as claimed in claim 39, comprising a plurality of connections, each connection being between a respective first mesh network tier sink node unit and a respective second mesh network tier unit whereby one of the first mesh network tier subscriber units is configured to be provided with a communication path via the respective first mesh network tier sink node to respective second mesh network tier unit.

41. (Currently Amended) A communications system as claimed in claim 40, comprising:

a third mesh network tier geographically overlapping the second network and comprising a plurality of third mesh network tier subscriber units and a third mesh network tier sink node unit configured to wirelessly communicate with the primary third mesh network tier unit; and

a connection between the second mesh network tier sink node unit and a third mesh network tier unit capable of communication in the third mesh network tier, whereby one of the second mesh network tier subscriber units is configured to be provided with a communication path via the second network sink node unit to another third mesh network tier unit.

42. (Currently Amended) A communications system as claimed in claim 41, wherein wireless communication in the first mesh network tier and in the second mesh network tier is independent of wireless communication in the third network.

43. (Currently Amended) A communications system as claimed in claim 42, wherein wireless communication in the first mesh network tier and in the second mesh network tier is in a different frequency band from wireless communication in the third mesh network tier.

44. (Currently Amended) A communications system as claimed in claim 43, wherein the second mesh network tier comprises a plurality of second mesh network tier sink

node units with which the second mesh network tier subscriber units are configured to wirelessly communicate.

45. (Currently Amended) A communications system as claimed in claim 44, comprising a plurality of a connections, each connection being between a respective second mesh network tier sink node unit and a respective third mesh network tier unit whereby one of the second mesh network tier subscriber units is configured to be provided with a communication path via the respective second mesh network tier sink node to a respective third mesh network tier unit.

46. (Previously Presented) A communications system as claimed in claim 36, wherein the said communication is data communication.

47. (Previously Presented) A communications system as claimed in claim 46, wherein the said communication is packet data communication.

48. (Previously Presented) A communications system as claimed in claim 36, wherein the said communication uses an internet protocol.

49. (Currently Amended) A communications system as claimed in claim 36, wherein the said communication in the first mesh network tier is radio communication.

50. (Currently Amended) A communications system as claimed in claim 36, wherein the said communication in the second mesh network tier is radio communication.

51. (Currently Amended) A communications system as claimed in claim 42, wherein the said communication in the third mesh network tier is radio communication.

52. (Currently Amended) A communications unit for operation in a communications system comprising a hierachical mesh network comprising at least a first mesh network tier and a second mesh network tier; including a the first mesh network tier comprising a

plurality of first mesh network tier subscriber units; and a the second mesh network tier geographically at least partly overlapping the first mesh network tier and comprising a plurality of second mesh network tier subscriber units and a second mesh network tier sink node unit configured to wirelessly communicate with the second mesh network tier subscriber units; wherein the communications unit is operable as a first mesh network tier sink node unit configured to wirelessly communicate with the first mesh network tier subscriber units, and further comprises a connection to a second mesh network tier unit capable of communication in the second mesh network tier, whereby a one of the first mesh network tier subscriber units may be provided with a communication path via the communications unit to the second mesh network tier unit.

53. (Currently Amended) A method for providing a communication path in a communications system comprising a hierachical mesh network comprising at least a first mesh network tier and a second mesh network tier: a the first mesh network tier comprising a plurality of first mesh network tier subscriber units and a first mesh network tier sink node unit configured to wirelessly communicate with the first mesh network tier subscriber units; and a the second mesh network tier geographically at least partly overlapping the first mesh network tier and comprising a plurality of mesh network tier subscriber units and a second mesh network tier sink node unit configured to wirelessly communicate with the second mesh network tier subscriber units; the method comprising providing a connection between the first mesh network tier sink node unit and a second mesh network tier unit configured to communicate in the second mesh network tier, whereby one of the first mesh network tier subscriber units is provided with a communication path via the first mesh network tier sink node to the second mesh network tier unit.

54. (Currently Amended) A communications system comprising a hierachical mesh network comprising at least a first mesh network tier and a second mesh network tier:

a the first mesh network tier comprising a first sink node and a plurality of first communication terminals configured to wirelessly communicate with the first sink node;

a second mesh network tier geographically at least partly overlapping the first

network and comprising a second sink node and a plurality of second communication terminals configured to wirelessly communicate with the second sink node;

wherein the first sink node is further configured to operate as a second communication terminal for providing one of the first communication terminals with communications access to the second mesh network tier.

55. (Currently Amended) A communications system as claimed in claim 54, wherein wireless communication in the first mesh network tier is independent of wireless communication in the second mesh network tier.

56. (Currently Amended) A communications system as claimed in claim 55, wherein wireless communication in the first mesh network tier is in a different frequency band from wireless communication in the second mesh network tier.

57. (Currently Amended) A communications system as claimed in claim 56, wherein the first mesh network tier comprises a plurality of first mesh network tier sink node units with which the first communication terminals are configured to wirelessly communicate.

58. (Currently Amended) A communications system as claimed in claim 57, comprising a plurality of a connections, each connection being between a respective first mesh network tier sink node unit and a respective second mesh network tier unit whereby a one of the first mesh network tier communication terminals is configured to be provided with a communications access via the respective first mesh network tier sink node to the second mesh network tier.

59. (Currently Amended) A communications system as claimed in claim 58, comprising:

a third mesh network tier geographically at least overlapping the second mesh network tier and comprising a plurality of third mesh network tier communication terminals and a third mesh network tier sink node unit configured to wirelessly communicate with the third mesh network tier communication terminals; and

a connection between a second mesh network tier sink node unit and a third mesh network tier unit configured to communicate in the third mesh network tier, whereby one of the second mesh network tier communication terminals is configured to be provided with communications access via the second mesh network tier sink node unit to the third mesh network tier.

60. (Currently Amended) A communications system as claimed in claim 59, wherein wireless communication in the first mesh network tier and in the second mesh network tier is independent of wireless communication in the third mesh network tier.

61. (Currently Amended) A communications system as claimed in claim 60, wherein wireless communication in the first mesh network tier and in the second mesh network tier is in a different frequency band from wireless communication in the third mesh network tier.

62. (Currently Amended) A communications system as claimed in claim 61, wherein the second mesh network tier comprises a plurality of second mesh network tier sink node units with which the second mesh network tier communication terminals are configured to wirelessly communicate.

63. (Currently Amended) A communications system as claimed in claim 62, comprising a plurality of a connections, each connection being between a respective second mesh network tier sink node unit and a respective third mesh network tier unit whereby one of the second mesh network tier communication terminals is configured to be provided with a communications access via the respective second mesh network tier sink node unit to the third mesh network tier.

64. (Previously Presented) A communications system as claimed in of claim 63, wherein the said communication is data communication.

65. (Previously Presented) A communications system as claimed in claim 64, wherein the said communication is packet data communication.

66. (Previously Presented) A communications system as claimed in claim 54, wherein the said communication uses an internet protocol.

67. (Currently Amended) A communications system as claimed in claim 54, wherein the said communication in the first mesh network tier is radio communication.

68. (Currently Amended) A communications system as claimed in claim 54, wherein the said communication in the second mesh network tier is radio communication.

69. (Currently Amended) A communications system as claimed in claim 60, wherein the said communication in the third mesh network tier is radio communication.

70. (Currently Amended) A communications unit for operation in a communications system ~~including a first network~~ a hierachical mesh network comprising at least a first mesh network tier and a second mesh network tier comprising a plurality of first communication terminals; a ~~the~~ second mesh network tier geographically at least partly overlapping the first mesh network tier and comprising a second sink node and a plurality of second communication terminals configured to wirelessly communicate with the second sink node; wherein the communications unit is operable as a first sink node configured to wirelessly communicate with the first communication terminals and of operation as a second communication terminal for providing one of the first communication terminals with communications access via the communications unit to the second mesh network tier.

71. (Currently Amended) A communications unit as claimed in claim 70, the wireless communication in the first mesh network tier is being independent of wireless communication in the second mesh network tier.

72. (Currently Amended) A communications unit as claimed in claim 71, the wireless communication in the first mesh network tier being in a different frequency band from wireless communication in the second mesh network tier.

73. (Currently Amended) A communications unit as claimed in claim 72, the first mesh network tier comprising a plurality of first mesh network tier sink node units with which the first mesh network tier subscriber units are configured to wirelessly communicate.

74. (Currently Amended) A communications unit as claimed in claim 73, the communications system comprising a plurality of a connections, each connection being between a respective first mesh network tier sink node unit and a respective second mesh network tier unit whereby one of the first mesh network tier subscriber units is configured to be provided with a communication path via the respective first mesh network tier sink node unit to the respective second mesh network tier unit.

75. (Currently Amended) A communications unit as claimed in claim 74, the communications system comprising:

- a third mesh network tier geographically overlapping the second mesh network tier and comprising a plurality of third mesh network tier subscriber units and a third mesh network tier sink node unit configured to wirelessly communicate with the primary third mesh network tier unit; and

- a connection between a second mesh network tier sink node unit and a third mesh network tier unit capable of communication in the third mesh network tier, whereby one of the second mesh network tier subscriber unit is configured to be provided with a communication path via the second mesh network tier sink node unit to another third mesh network tier unit.

76. (Currently Amended) A communications unit as claimed in claim 75, the wireless communication in the first mesh network tier and in the second mesh network tier being independent of wireless communication in the third mesh network tier.

77. (Currently Amended) A communications unit as claimed in claim 76, the wireless communication in the first mesh network tier and in the second mesh network tier being in a different frequency band from wireless communication in the third mesh network tier.

78. (Currently Amended) A communications unit as claimed in claim 77, the second mesh network tier comprising a plurality of second mesh network tier sink node units with which the second mesh network tier subscriber units are configured to wirelessly communicate.

79. (Currently Amended) A communications unit as claimed in claim 78, the communications system comprising a plurality of a connections, each connection being between a respective second mesh network tier sink node unit and a respective third mesh network tier unit whereby one of the second mesh network tier subscriber units is configured to be provided with a communication path via the respective second mesh network tier sink node unit to another third mesh network tier unit.

80. (Previously Presented) A communications unit as claimed in claim 79, the said communication being data communication.

81. (Previously Presented) A communications unit as claimed in claim 80, the said communication being packet data communication.

82. (Previously Presented) A communications unit as claimed in claim 70, the said communication using an internet protocol.

83. (Currently Amended) A communications unit as claimed in claim 70, the said communication in the first mesh network tier being radio communication.

84. (Currently Amended) A communications unit as claimed in claim 70, the said communication in the mesh network tier network being radio communication.

85. (Currently Amended) A communications unit as claimed in claim 75, the said communication in the third mesh network tier being radio communication.

86. (Currently Amended) A method for operating a communications unit in a communications system including a hierachical mesh network comprising at least a first mesh network tier and a second mesh network tier, a the first mesh network tier comprising a plurality of first communication terminals; a the second mesh network tier geographically at least partly overlapping the first mesh network tier and comprising a second sink node and a plurality of second communication terminals configured to wirelessly communicate with the second sink node; the method comprising operating the communications unit as a first sink node configured to wirelessly communicate with the first communication terminals; and operating the communications unit as a second communication terminal for providing one of the first communication terminals with communications access to the second mesh network tier via the first communication terminal.

87. (Currently Amended) A processor configured to execute a computer program at a communications unit, the communications unit operating in a communications system including a hierachical mesh network comprising at least a first mesh network tier and a second mesh network tier, a the first mesh network tier comprising a plurality of first communication terminals; a the second mesh network tier geographically at least partly overlapping the first mesh network tier and comprising a second sink node and a plurality of second communication terminals capable of wireless communication with the second sink node; the computer program being configured to cause the communication unit to operate as a first sink node capable of wireless communication with the first communication terminals and as a second communication terminal for providing the first communication terminals with communications access via the communications unit to the second mesh network tier.

88. (Currently Amended) A controller for a communications unit operating in a communications system including a hierachical mesh network comprising at least a first mesh network tier and a second mesh network tier, a the first mesh network tier comprising a plurality of first communication terminals; a the second mesh network tier geographically at least partly overlapping the first mesh network tier and comprising a second sink node and a plurality of second communication terminals capable of wireless communication with the second sink node; the controller being configured to cause the communication unit to operate as a first sink node capable of wireless communication with the first communication terminals and as a second communication terminal for providing one of the first communication terminals with communications access via the communications unit to the second mesh network tier.